Advanced Authentication 6.4
ADFS Multi-Factor Authentication Plug-in

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We are a global, enterprise software company, with a focus on the three persistent challenges in your environment: Change, complexity and risk—and how we can help you control them.

Our Viewpoint

Adapting to change and managing complexity and risk are nothing new

In fact, of all the challenges you face, these are perhaps the most prominent variables that deny you the control you need to securely measure, monitor, and manage your physical, virtual, and cloud computing environments.

Enabling critical business services, better and faster

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Our Philosophy

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About this Book

The ADFS Multi Factor Authentication (MFA) Plug-in Installation Guide provides users with system requirements that must be fulfilled before the installation of Advanced Authentication ADFS MFA plug-in.

Intended Audience

This book provides information for individuals responsible for understanding administration concepts and implementing a secure, distributed administration model.

About ADFS Multi-Factor Authentication Plug-in

ADFS MFA plug-in provides you with the ability to integrate Advanced Authentication with Active Directory Federation Services 3.0 (Windows Server 2012 R2) or Active Directory Federation Services 4.0 (Windows Server 2016). This helps you to perform strong authentication to access the secured systems and applications.

NOTE: The ADFS MFA plug-in supports the following methods: Email OTP, Emergency password, HOTP, LDAP password, Password, RADIUS, SMS OTP, TOTP, and Voice OTP. To use the other authentication methods of Advanced Authentication, you need not install and configure the ADFS MFA plug-in. You can integrate with ADFS - using SAML. For more information, see “Configuring Integration with ADFS (https://www.netiq.com/documentation/advanced-authentication-63/server-administrator-guide/data/config_intrgtn_salesforce_adfs.html)” in the Advanced Authentication - Administration guide.
The following diagram illustrates the common deployment of ADFS Multi-Factor plug-in.

**Figure 1**  *ADFS Multi-Factor Authentication Plug-in*
1 System Requirements

**IMPORTANT:** You must have the local administrator privileges to install and uninstall the ADFS MFA plug-in.

Ensure that the system meets the following requirements:

- Microsoft Windows Server 2012 R2, 2016, or 2019 [GUI].
- Microsoft .NET Framework 4.5
- ADFS role installed and configured. It must work correctly without the ADFS MFA plug-in

**NOTE:** It is recommended to have at least a self-signed certificate configured on Advanced Authentication. For more information, see “Configuring Server Options” in the *Advanced Authentication - Administration* guide.
Installing and Uninstalling the ADFS Multi-Factor Authentication Plug-in

- Installing the ADFS MFA Plug-in
- Uninstalling the ADFS MFA Plug-in

Installing the ADFS MFA Plug-in

1. Run the file NAAF-ADFSMFAPlugin-x64-Release-<version>.msi.
2. Click Next.
3. Read and accept the License Agreement and click Next.
4. Click Next to install the ADFS MFA plug-in to the default folder (%ProgramFiles%\NetIQ\AAF ADFS MFA Plugin\).
   or
   Click Change to choose another folder.
5. Click Next.
6. Click Install.
7. Click Finish.

After you install the ADFS MFA plug-in, the Administration Tool is installed.

**NOTE:** You can find the ADFS MFA plug-in component in the Advanced Authentication Enterprise Edition or the Remote Access Edition distributive package.

You can install the plug-in on the other ADFS servers in the ADFS farm after installing and configuring the plug-in.

Uninstalling the ADFS MFA Plug-in

**IMPORTANT:** Before uninstalling the last ADFS MFA plug-in the ADFS farm, perform the following steps:

Microsoft Windows Server 2012 R2

1. Click Authentication Policies.
2. Click Edit in Primary Authentication.
3. Click the Multi-factor tab in Edit Global Authentication Policy.
5 Click Apply.
6 Click OK.

**Microsoft Windows Server 2016**

1 Click Authentication Methods.
2 Click Edit in Primary Authentication Methods.
3 Click the Multi-factor tab in Edit Authentication Methods.
4 Clear AAF ADFS MFA Plugin.
5 Click Apply.
6 Click OK.

To uninstall the ADFS MFA plug-in, perform the following steps:

1 In the Administration Tool, click Disable.
2 Click Start > Control Panel > Programs and Features.
3 Select NetIQ AAF ADFS MFA Plugin and click Uninstall.
4 Confirm the uninstallation.
Configuring the ADFS Multi-Factor Authentication Plug-in

This chapter contains the following sections.

- “Configuring the Advanced Authentication ADFS MFA Plug-in” on page 13
- “Customizing the Branding of Advanced Authentication ADFS MFA Plug-in” on page 14

Configuring the Advanced Authentication ADFS MFA Plug-in

To configure the Advanced Authentication ADFS MFA plug-in, perform the following steps:

1. Launch the Administration Tool.
2. Specify a DNS name or IP address of an Advanced Authentication server without https:// in Server URL.
3. Select Ignore SSL errors if the server has an invalid certificate (self-signed or expired).
4. The Event name, Tenant name, and Templates path are auto populated. You can edit them as per your requirement.

**NOTE:** The Tenant name is ignored when multitenancy is disabled. Administrators need not edit the value of this field.

5. Specify a secret. The secret must contain a minimum of eight characters that include numbers and uppercase characters.
6. Click Save.
7. Click Enable only if it is a first (primary) server in the ADFS farm. For the other servers, you must click Restart ADFS.

An endpoint will be created in the Endpoints section of the Advanced Authentication Administration portal.

After an endpoint is created in the Advanced Authentication server, the config.properties and ep.properties files are automatically created with the set configurations in the path C:\ProgramData\NetIQ\AAF ADFS MFA Plugin.

In the ADFS farm, all the plug-ins must have the same version of ADFS. If the versions are different, the synchronization will not happen and this affects the functionality of the plug-in.

**IMPORTANT:** During upgrading an ADFS MFA plug-in, it is recommended to upgrade all the other ADFS MFA plug-ins in the ADFS Farm.

For example, if you upgrade AAF ADFS MFA Plugin 6.0 to AAF ADFS MFA Plugin 6.1, then you must ensure that all the other plug-ins in the farm are also upgraded to ADFS 6.1.
Customizing the Branding of Advanced Authentication ADFS MFA Plug-in

This section contains the information on how to customize the branding of the Advanced Authentication ADFS MFA plug-in. Perform the following steps to customize the ADFS MFA plug-in templates:

1. Launch the Administration Tool.
2. Obtain the Templates Path from Administration Tool. The default path is following:

   %ProgramFiles%\NetIQ\AAF ADFS MFA Plugin\templates

3. The following table contains the files present in Templates Path and describes the customization options.

   **IMPORTANT:** The information specified in {{}} is returned by Advanced Authentication server and displayed to the users. You can change the textual information outside {{}} to add custom branding or preferred descriptions.

<table>
<thead>
<tr>
<th>Filename</th>
<th>Customization Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>SelectChain.txt</td>
<td>This file contains the following customization options for the chain selection:</td>
</tr>
<tr>
<td></td>
<td>{{0}}: Contains the list of chains</td>
</tr>
<tr>
<td></td>
<td>{{1}}: Contains the text for the Next button.</td>
</tr>
<tr>
<td>ChainInfo.txt</td>
<td>This file contains the following customization options for the chain information:</td>
</tr>
<tr>
<td></td>
<td>{{0}}: Contains the chains identifier</td>
</tr>
<tr>
<td></td>
<td>{{1}}: Contains a default value for individual chains</td>
</tr>
<tr>
<td></td>
<td>{{2}}: Contains a text description for chains.</td>
</tr>
<tr>
<td>LogonForm_&lt;METHOD&gt;_1.txt</td>
<td>This file contains the following customization options for the login form:</td>
</tr>
<tr>
<td></td>
<td>{{0}}: Contains the message returned from the server. For example, Invalid Password</td>
</tr>
<tr>
<td></td>
<td>{{1}}: Contains a message that is displayed to the user that prompts user to input a value. For example, Specify One Time Password</td>
</tr>
<tr>
<td></td>
<td>{{2}}: Contains the text for the Next button.</td>
</tr>
<tr>
<td>FatalError.txt</td>
<td>This file contains the error message text.</td>
</tr>
</tbody>
</table>
After you configure the ADFS MFA plug-in, you must create a customized ADFS event to enable multi-factor authentication to ADFS.

To configure Advanced Authentication, perform the following steps:

1. Open the Advanced Authentication Administration portal.
2. Click **Events > Add**.
3. Create a customized event with the following parameters:
   - **Name**: Specify the name that you have specified in the Administration Tool. The default name is **MFA ADFS**.
   - **Event type**: Select **Generic**.
   - **Select the required chains**.
     You need not add the LDAP Password method in the chains because the multi-factor authentication with Advanced Authentication is done after the standard authentication with the Password method.
4. Click **Save**.
5. Open the ADFS console.
6. Click **Authentication Policies**.
7. In the **Actions** pane, click **Edit Global Primary Authentication Policies**.
8. Click the **Multi-factor** tab.
9. In **Select additional authentication method**, select **AAF ADFS MFA Plugin** and click **Apply**.

**NOTE**: ADFS MFA plug-in supports the following methods: Email OTP, Emergency password, HOTP, LDAP password, Password, RADIUS, SMS OTP, TOTP, and Voice OTP.

To use the other authentication methods of Advanced Authentication, you need not install and configure the ADFS MFA plug-in. You can integrate with ADFS - using SAML. For more information, see “Configuring Integration with ADFS (https://www.netiq.com/documentation/advanced-authentication-63/server-administrator-guide/data/config_intrgtn_salesforce_adfs.html)” in the Advanced Authentication - Administration guide.
Configuring Multi-Factor Authentication on the ADFS Server for Testing Purpose

After you have installed and configured ADFS and configured the appliance with LDAP, you must configure MFA on the ADFS server.

To configure MFA on the ADFS server, perform the following steps:

1. Enable the Test page ADFS.

   **NOTE:** ADFS 2016 disables the *idpinitiatedsignon* page by default. You must manually enable it using the following command in Windows PowerShell:
   ```
   Set-AdfsProperties -EnableIdPInitiatedSignonPage $true
   ```


3. Open the ADFS console.


5. Select Claim Aware and click Start.

6. Select Import data about the relying party published online or on a local network.


8. Click Next.

9. Specify the Display name and description (optional).

10. Select an access control policy as Permit everyone and require MFA.

11. Click Next.

12. Verify the configuration in the Ready to Add Trust tab.

13. Click Next.

To obtain the debug logs for ADFS MFA plug-in, perform the following steps:

1. Run DiagTool.exe (the tool must have Microsoft .NET Framework 3.5 installed).
2. Click Clear All in the Debug logs tab.
3. Click Enable.
4. Restart the system.
5. Reproduce your problem.
7. Click Save logs in the Debug logs tab.
8. Specify a file name and path.
9. Click Save.
10. Click Disable.
11. Click Clear All.

If you do not have the Diagnostic Tool, you can perform the actions manually:

1. Create a text file config.properties in the folder C:\ProgramData\NetIQ\Logging\.
2. Add a string to the file: logEnabled=True that ends with a line break.
3. Create a directory: C:\ProgramData\NetIQ\Logging\Logs\.
4. Restart the machine.
5. Reproduce your problem.
6. Pack the logs located in the folder C:\ProgramData\NetIQ\Logging\Logs\ into a zip file.
7. Change logEnabled=True to logEnabled=False in the folder C:\ProgramData\NetIQ\Logging\config.properties

With the Diagnostic Tool, you can check the network problems on a workstation, issues in connection between a workstation and DNS Server, and to get a list of the Advanced Authentication Servers that can be discovered. To do this, perform the following steps:

1. Run DiagTool.exe (the tool must have Microsoft .NET Framework 3.5 installed).
2. Switch to the Servers tab.
3. In the Search settings you must enter FQDN in Domain and click Search. A list of Advanced Authentication Servers is displayed.
4. If the list is not displayed, clear Use system DNS server and enter the IP address of your DNS server in DNS server and click Search again.